User Manual

Automatic Sanitization Module

Model: TANKASMIN

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Document

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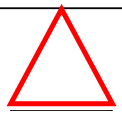
Safety Information

Statement

The ASM and other equipment must be operated according to the instructions in this manual. In particular, the hydraulic and electrical specifications must be followed and met. It is important to use this equipment as specified in this manual; using this equipment in a different manner may impair the safety precautions of the water system.

Symbols

Symbol	Meaning
	The light from an UV Lamp is very damaging to your eyes and to your skin. Do not remove the ASM UV Lamp at any time unless its power cable is totally removed from the adjacent Water System.
	The UV Lamp contains metallic Mercury. Please dispose of any used UV Lamp in a manner that is environmentally safe.
	Danger: UV radiation! This sticker is used to refer to a position on the Water System Cabinet or inside.
	Danger! This sticker is used to refer to a position on the Water System cabinet or inside.
	Ground connection! This sticker is used to refer to a position on the Water System Cabinet or inside.
	Electrical danger! This sticker is used to refer to a position on the Water System Cabinet or inside.

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Product information

Function

The Automatic Sanitization Module (ASM) is designed to be fitted on Millipore water storage reservoirs such as the 30 L, 60 L or 100 L PE Reservoirs or the SDS 200/350.

The ASM is electrically powered and controlled by an adjacent water system. The ASM illumination cycles are programmed via the water system keypad and software.

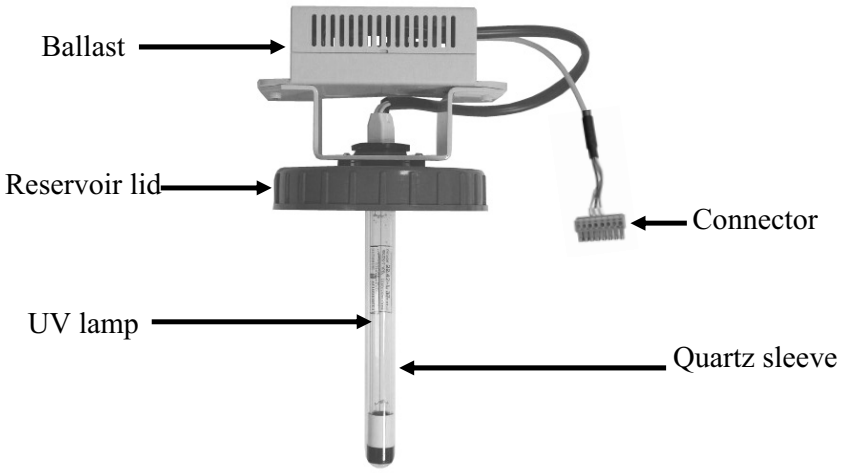
Purpose

The ASM makes use of the germicidal properties of ultra-violet (UV) light at 254 nm.
The ASM prevents the formation of biofilm inside the Reservoir.

Components

The table describes the main components of an ASM.

Part	Function
Connector	A plastic part that connects the ASM directly on the water system.
Ballast	An electrical board that powers the UV lamp.
Quartz sleeve	A glass tube that protects the UV lamp.
UV lamp	A lamp that emits UV rays.
Reservoir lid and o-ring	A plug that can be screwed on all Millipore reservoir opening.



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Weight and dimensions

ASM weight

The ASM weighs 1 kg.

ASM dimensions

Specification	Value
Height	320 mm
Width	170 mm

Power cable

The maximum length of the power cable is 5 m.

Electrical specifications

The table shows the value of each specification.

Specification	Value
Consumption	12 VA
Supply Voltage to ASM	24 VDC

Environmental specifications

The ASM is intended for indoor use only, under the conditions stated below.

Specification	Range or value
Ambient storage temperature	between 5 - 40°C
Altitude	below 3000 m
Installation category	II
Pollution degree	2

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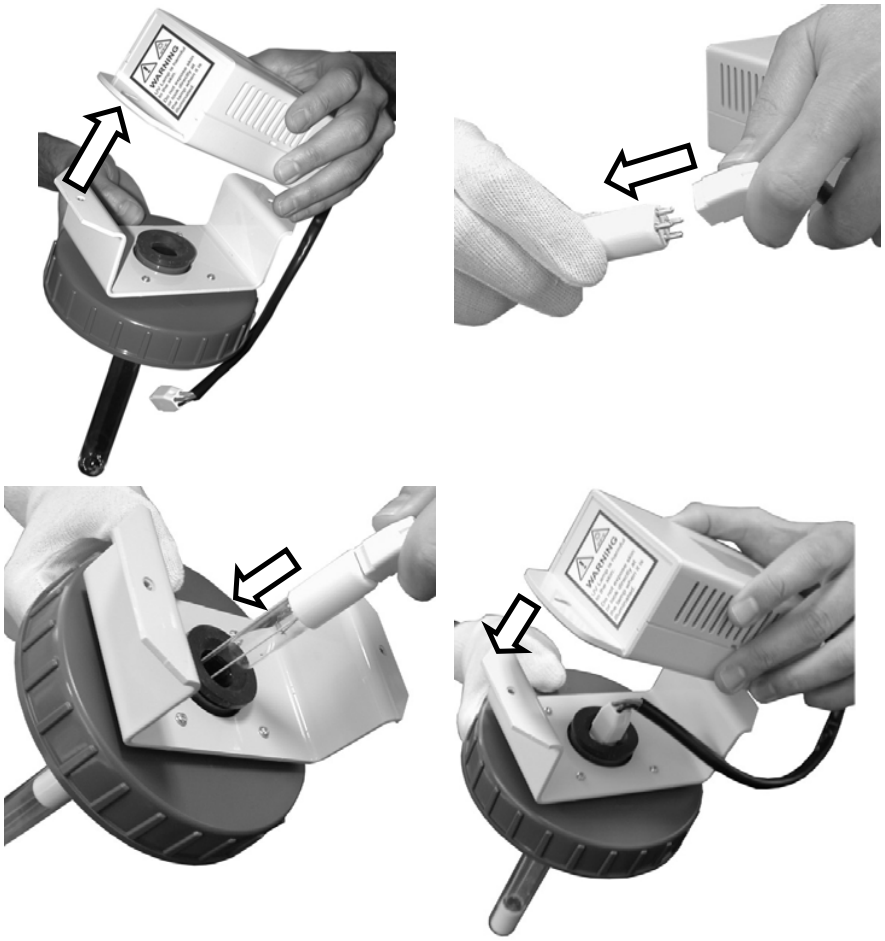
ASM installation

UV lamp

Before proceeding, make sure the ASM is not electrically connected to the Water System.

The following procedure shows the installation of the UV lamp.

Step	Action
1	Separate the ballast from the reservoir lid by removing the two screws.
2	Connect the Ballast wires to the UV lamp by pushing the connector onto the 4 pins of the UV Lamp.
3	Insert the UV lamp into the quartz sleeve. ***Attention! Handle the UV lamp carefully. Use gloves.***
4	Secure the ballast to the reservoir lid with the two screws.



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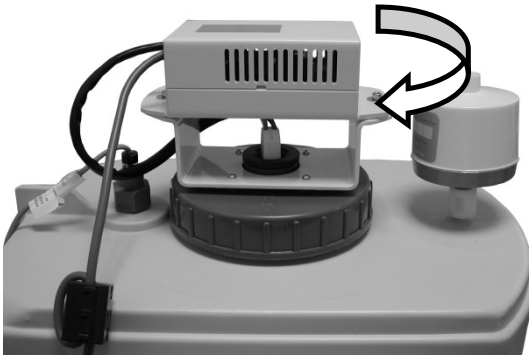
ASM installation, Continued

ASM on a reservoir

Put the ASM onto the top of the Reservoir by following the steps below.

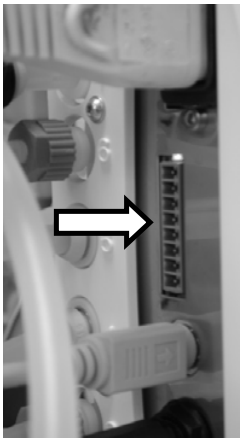
Step	Action
1	Remove the lid coming with the storage reservoir. This lid will no longer be used.
2	Take the ASM and verify that the o-ring is well positioned, inside the lid.
3	Screw the ASM with its lid onto the reservoir until it is hand tight. Since there is an o-ring inside the lid, there is no need to overtighten it.

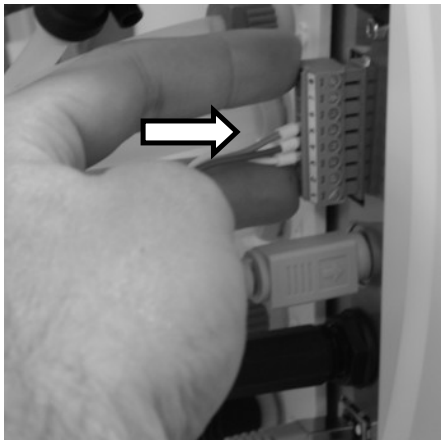


Electrical connection

Make sure the Water System is not powered when connecting the ASM electrical cable. In addition, make sure the ASM UV Lamp is inside the Reservoir.

- The ASM is connected on the side of the water system.
- Push the connector into the socket located on the left side of the system.





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ASM installation, Continued

Software activation

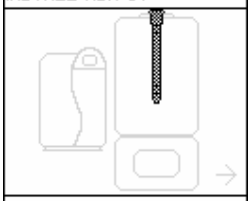
The ASM must be activated into the water system software.

- In the Service Menu, go in CONFIG and ASM Activation.
- Choose "Yes" and press ↵.

CONFIG	ASM ACTIVATION
MQ Inlet Valve Status →	Yes ✓
Id & Password →	No
Buzzer →	
UV 185 nm Activation →	
UV 254 nm Activation →	
ASM Activation →	
Water Sensor →	

Registering ASM UV lamp

- The ASM UV lamp timer has to be registered.
- In Standby Menu, go in Maintenance. And follow the screen instructions.

STANDBY MENU	MAINTENANCE	INSTALL ASM UV
Maintenance →	Install UV 185 Lamp →	
Sanitise/Clean →	Install Quantum →	
Suitability Tests →	Install A10 Lamp →	
Language →	Install Q-POD Pak 1 →	
Manager Menu →	Install Q-POD Pak 2 →	
	Install E-POD Pak 3 →	
	Install ASM UV →	

INSTALL ASM UV	INSTALL ASM UV	INSTALL ASM UV
This procedure should be performed by a Millipore trained service engineer. Press → to continue or ← to exit.	The Millipore trained service engineer confirms the ASM UV installation by pressing ↵. Press ← to exit.	ASM UV installation is registered. Next maintenance in 730 days. Press ← to exit.

ASM programming

Manager Menu access

Access the Manager Menu in Standby Mode, go in
- Standby Menu,
- access the Manager Menu,
- go to Setup
- and then to ASM Lamp Schedule.

LOGIN & PASSWORD
Login:
Password:
a b c d e f g h i j k l m n o p
q r s t u v w x y z 0 1 2 3 4 5
6 7 8 9 - _ @ .
A≠a
Press ↙ to exit.
MANAGER MENU
Change ID and Pass →
Date and Time →
Set Points →
Units →
Setup →
User Parameters →
History →
SETUP
POD Flow Stop →
Temp Comp Mode →
Flow Calibration →
UV 254 nm Activation →
UV 185 nm Activation →
ASM Lamp Schedule →
Network Settings →

ASM Lamp Schedule

The “ASM Lamp Schedule” software function is used to program the illumination cycles of the ASM UV lamp.

Definition

- There are 5 cycles which allow a daily total of 45 minutes illumination.
- Each cycle can be programmed to start at a certain time. This time can be set in a range of 24 hours, from midnight 00:00 to 23:59.
- The duration of each cycle can be adjusted from 0 to 45 minutes depending on the number of cycles. The value 0 means that the cycle is disabled.

Programming

- Press or to adjust values.
- Press or to navigate.
- Press to validate and to exit.

Step	Action
1	Set the time by changing the hour and minute.
2	Set the duration of the cycle.
3	Repeat the steps above for other cycles.
4	Validate to exit the ASM UV Lamp Schedule.

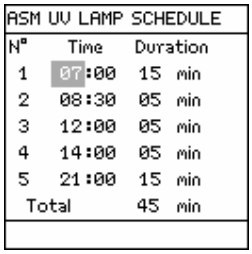
Continued on next page

ASM programming, Continued

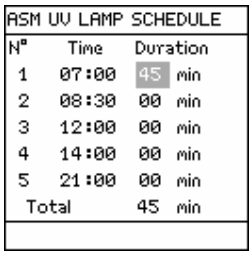
Example

- This table shows an example of "ASM UV Lamp Schedule" display.

Cycle	Description
1	The ASM UV lamp is powered at 07:00 for 15 min.
2	The ASM UV lamp is powered at 08:30 for 5 min.
3	The ASM UV lamp is powered at 12:00 for 5 min.
4	The ASM UV lamp is powered at 14:00 for 5 min.
5	The ASM UV lamp is powered at 21:00 for 15 min.

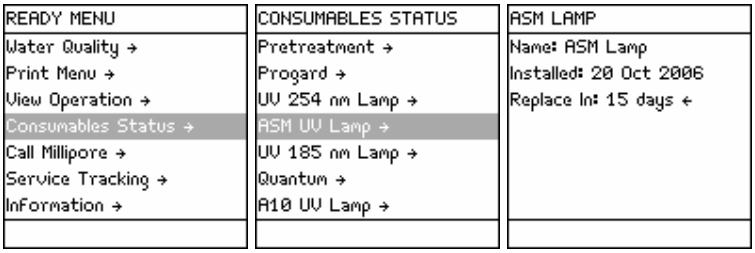


- Another example is shown where only cycle N°1 is programmed: the ASM UV lamp is powered at 7:00 for 45 min.



ASM UV lifetime

It is possible to view the amount of time remaining before the water system prompts you to replace the ASM lamp.
This can be viewed in 'Consumable Status' found in the READY Menu.



Maintenance

Alert messages

Definition

Alert messages are displayed when a maintenance action is needed within a few days or is needed immediately.
(Refer to the Water system User Manual for more information on Alert messages.)

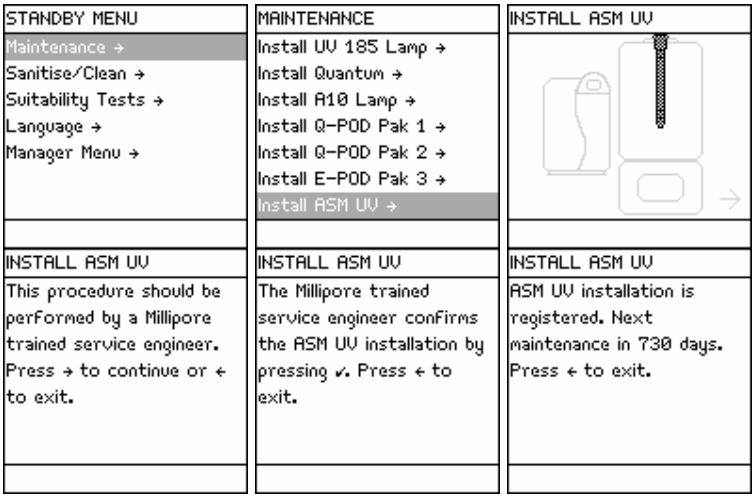
Summary

The Alert messages are listed below.

Type	Description - Action
CHECK ASM UV LAMP	UV lamp issue - Contact Millipore.
REPLACE ASM UV LAMP IN xx DAYS	UV lamp replacement will be needed in xx days - Order new UV lamp. Contact Millipore.
REPLACE ASM UV LAMP	UV lamp replacement is needed - Contact Millipore.

UV lamp replacement

- The ASM UV lamp is normally replaced every 730 days.
- It is recommended to have a Millipore Field Representative replace the UV lamp. Contact Millipore for a copy of these instructions if you want to replace the UV Lamp by yourself.
- If the UV lamp is replaced, then the ASM UV Lamp needs to be registered via the Maintenance Software. This resets the timer used to prompt the replacement of the ASM UV Lamp.


STANDBY MENU
Maintenance →
Sanitise/Clean →
Suitability Tests →
Language →
Manager Menu →
MAINTENANCE
Install UV 185 Lamp →
Install Quantum →
Install A10 Lamp →
Install Q-POD Pak 1 →
Install Q-POD Pak 2 →
Install E-POD Pak 3 →
Install ASM UV →
INSTALL ASM UV
INSTALL ASM UV
This procedure should be performed by a Millipore trained service engineer. Press → to continue or ← to exit.
INSTALL ASM UV
The Millipore trained service engineer confirms the ASM UV installation by pressing ✓. Press ← to exit.
INSTALL ASM UV
ASM UV installation is registered. Next maintenance in 730 days. Press ← to exit.

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Maintenance, Continued

Quartz sleeve cleaning

- Periodically visually check that the quartz sleeve is clean and free of anything that would interfere with the transmission of UV light.
- If necessary, clean with an ethanol soaked cloth in order to maintain the effectiveness of the UV lamp.
- After cleaning with ethanol, rinse the Quartz Sleeve with purified water.

Disconnect the ASM from the water system before doing any maintenance on it.

Ordering information

Catalogue numbers

The consumables catalogue numbers are found below.

Item	Catalogue number
Automatic Sanitization Module	TANKASMIN
254 nm UV lamp	ZLXUVLPL1
215 mm quartz sleeve	ZF3000219